



# PUBLIC NOTICE

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**DA 09-2434**  
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## **COMMENT SOUGHT ON RESEARCH NECESSARY FOR BROADBAND LEADERSHIP** **NBP Public Notice #22**

### **PLEADING CYCLE ESTABLISHED**

**GN Docket Nos. 09-47, 09-51, 09-137**

**Comment Date: December 8, 2009**

Establishing the U.S. as a leader in broadband is an admirable goal that enjoys near universal agreement, but how we reach that goal is a contentious question that requires a good deal of research and careful analysis.<sup>1</sup> To that end the Broadband Task Force at the FCC is initiating a proceeding to develop research recommendations for Congress to enable the U.S. to advance broadband deployment in the U.S. over the next decade and to be a global leader in broadband networking in the years 2020 and beyond. That effort is being led by Dr. Douglas Sicker, Associate Professor at the College of Engineering and Applied Science at the University of Colorado, Boulder, an expert in network systems.<sup>2</sup> This Public Notice is the starting point, a solicitation for ideas on how to achieve this task. The plan will consider the competitiveness of the U.S. marketplace; more specifically, how research funding might help bolster areas where the U.S. can lead technology innovation. The process of developing these recommendations should focus on an open discussion with substantial outreach to industry, academia, government, and the public. We seek targeted comment on this research that will help the U.S. achieve broadband leadership.

1. What is the state of broadband-related research funding today, and what trends are already emerging?
  - a. What are the levels of federally funded research, and how are these changing?
  - b. What types of projects are being funded by federal agencies; what mechanisms are used to fund them; and how are these projects and mechanisms changing?
  - c. What process are currently available for obtaining federal funding for research related to broadband?
  - d. What organizations provide such funding?
  - e. What areas of research should be included in an overall broadband research initiative and how should goals be established?
  - f. What role, if any should the FCC play in encouraging research in broadband? What role should other agencies or departments play?
  - g. What are the levels and trends for research funding by the private sector?
  - h. Is there a process for coordinating federal funding of broadband research with the private

<sup>1</sup> See National Broadband Plan Workshops: International Lessons (2009) (transcript at 22–27, 75–77, available at [http://broadband.gov/docs/ws\\_07\\_int\\_lessons.pdf](http://broadband.gov/docs/ws_07_int_lessons.pdf)) (last visited Nov. 17, 2009).

<sup>2</sup> Dr. Sicker is a Senior Advisor to the FCC's Broadband Task Force.

- sector? Is it effective? If not, should one be established? How might it work?
  - i. Are state and local governments playing a significant role in research funding?
  - j. How does the U.S. compare with other nations in research funding? What lessons should we learn?
2. What are the shortcomings of the current research funding process as it relates to broadband?
    - a. What have been the lessons learned from past research networks such as Internet II, the Abilene Network, National Lambda Rail, etc.?
    - b. Is there anything that might be done to enhance the productivity or quality of research in the U.S.?
    - c. Are there areas where additional research funding could have a substantial impact?
    - d. What are impediments to research, particularly groundbreaking research such as the research programs that led to the Internet? For example should research funding be comprised of fewer grants for longer time periods?
  3. What research do we anticipate will occur within industry and therefore might not require federal funding (or might require federal funding in a lesser amount)?
    - a. What are the areas where federally sponsored research is not needed because market forces will drive innovations (e.g., the development of advanced low cost broadband wireless consumer devices)?
  4. What about the role of commercialization of research efforts?
    - a. What is the role of industry in providing input to the overall research process?
    - b. What is the role of Small Business Innovation Research and similar efforts?
    - c. Is there more that the federal government could do to enhance commercialization?
  5. How do we ensure broad research funding where we enable the unexpected or major discoveries?
    - a. By shifting funding to high risk projects?
    - b. By shifting funding to areas where the benefits are not immediately captured, regardless of whether high or low risk (because it is forward-looking or because it serves a public good with a small market)?
    - c. By shifting funding to education for the next generation of research scientists?
    - d. By shifting funding to emerging areas?
    - e. By shifting funding to core theory (this is an area that often suffers when funding shifts to applied research)?
  6. What funding is occurring within the venture capital community as it relates to broadband?
    - a. How is this expected to change with potential policy changes?
    - b. For funding that is occurring, at what stage, and for what kinds of projects?
  7. What is the role of technology transfer in this process?
    - a. Are there any intellectual property issues that must be considered?
    - b. Are there any institutional barriers that must be addressed?
  8. What fields/areas of research should be priorities? What should the on-going process be for determining the fields/areas of research and priorities?
  9. How broadly should we define “research recommendations”?
    - a. Should “research recommendations” include, for the purpose of broadband research, recommendations beyond technology research (e.g., economics of broadband, market concerns, and policy research)?

- b. Should “research recommendations” include research that affects the quality of broadband infrastructure, the ubiquity of broadband infrastructure, the adoption or utilization of broadband infrastructure, the applications that are designed for broadband infrastructure, and use of broadband applications for a number of important purposes specified by Congress (e.g., education, energy, health, and economic development)?

This matter shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules. See 47 C.F.R. §§ 1.1200, 1.1206. Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one- or two-sentence description of the views and arguments presented generally is required. See 47 C.F.R. § 1.1206(b). Other rules pertaining to oral and written *ex parte* presentations in permit-but-disclose proceedings are set forth in section 1.1206(b) of the Commission’s rules, 47 C.F.R. § 1.1206(b).

**All comments should refer to GN Docket Nos. 09-47, 09-51, and 09-137. Please title comments responsive to this Notice as “Comments—NBP Public Notice # 22.” Further, we strongly encourage parties to develop responses to this Notice that adhere to the organization and structure of the questions in this Notice.**

Comments may be filed using (1) the Commission’s Electronic Comment Filing System (ECFS), (2) the Federal Government’s eRulemaking Portal, or (3) by filing paper copies.<sup>3</sup> Comments can be filed through the Commission’s ECFS filing interface located at the following Internet address: <http://www.fcc.gov/cgb/ecfs/>. Comments can also be filed via the Federal eRulemaking Portal: <http://www.regulations.gov>.<sup>4</sup> Generally, only one copy of an electronic submission must be filed. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties who choose to file by paper must file an original and four copies of each filing.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission.

- The Commission’s contractor will receive hand-delivered or messenger-delivered paper filings for the Commission’s Secretary at 236 Massachusetts Avenue, N.E., Suite 110, Washington, D.C. 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class mail, Express Mail, and Priority Mail should be addressed to 445 12th Street, S.W., Washington, D.C. 20554.

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<sup>3</sup> See Electronic Filing of Documents in Rulemaking Proceedings, 63 Fed. Reg. 24121 (1998).

<sup>4</sup> Filers should follow the instructions provided on the Federal eRulemaking Portal website for submitting comments.

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For further information about this Public Notice, please contact Randy Clarke at (202) 418-1500.

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